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Question Paper

Duration: 30 Mins

Total Marks: 422

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Student Name: _____	Roll No: _____
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1. What is the current rating of voltage regulator IC LM338K?

- A) 2A B) 3A
C) 4A D) 5A

2. What is the input impedance of IGBT?

- A) Medium input impedance B) Infinity input impedance
C) Low input impedance D) High input impedance

3. Which is the package type for the JFET BFW10?

- A) TO-82 B) TO-92
C) TO-62 D) TO-72

4. What is the function of schottky diode BA 157 in SMPS circuit?

- A) Switching diode B) Voltage regulator
C) Fast recovery diode D) Error amplifier

5. Which frame is used for winding the coil of PMMC meter?

- A) Ceramic frame B) Steel frame
C) Aluminium frame D) Wooden frame

6. What is the full of the abbreviation DPDT used in switches?

- A) Double Pole Direct Throw B) Double Pole Double Throw
C) Dual Phase Dual Throw D) Direct Pole Double Throw

7. How the electrical quantity measured by the meter is marked in it?

- A) Printing the values B) Printing the values
C) Using colour codes D) Directly printing the specifications

8. Which parameter of the wire is directly proportional to the current carrying capacity?

- A) Conductor s diameter B) Wire resistance
C) Passing current D) Conductor s shape

9. What will happen in SCR with forward biased condition and gate current is applied?

- A) Reverse current turned off B) Forward current conduction stops
C) Reverse current conduction commences D) Forward current conduction commences

10. Which circuit is determined by the frequency of LC tank circuit?

- A) Demodulator B) Oscillator
C) Multiplexed D) Amplifier

11. Which type of wave is generated in Schmitt trigger circuit?

- A) Sine wave B) Saw tooth wave
C) Triangular wave D) Square wave

12. Which parameter is measured by a multimeter?

- A) Voltage B) Time duration
C) Frequency D) Energy

13. Which band is used for UHF in International Telecommunication System?

- A) Band 6 B) Band 4
C) Band 11 D) Band 9

14. How the sensitivity of voltmeter is determined?

- A) Ohms per volt rating B) Maximum voltage measurement
C) FSD current D) Meter coil resistance

15. What is the range of output voltage of regulator IC LM 317?

- A) 1.2 V to 32 V B) 0 to 30 V
C) 0 to 32 V D) 0 to 25 V

16. How can you confirm a transistor as defective?

- A) By circuit testing B) By physical testing
C) By voltage measurements D) By ohm meter testing

17. How batteries are classified based on their working?

- A) Button cells and lithium cells
B) Dry cells and alkaline cells
C) Primary cells and secondary cells
D) Cylindrical cells and rectangular cells

18. What is the maximum drain-source voltage, V_{DS} for the JFET BF 245B?

- A) 10 V
B) 30 V
C) 40 V
D) 20 V

19. How the negative feedback is called?

- A) Regenerative feedback
B) Degenerative feedback
C) Current controlled feedback
D) Voltage controlled feedback

20. What is the advantage of MOSFET?

- A) Low thermal ionisation of electron-holes
B) Fast switching speed
C) Higher power gate signal
D) Slow switching speed

21. What is the advantage of SMPS in computer?

- A) Servicing of SMPS is easy
B) High efficiency
C) High frequency noise low
D) Bulky

22. What is the limitation of integrated circuits?

- A) Drains more current
B) Increased reliability
C) Greater flexibility
D) Greater flexibility

23. Which gauge number of rosin-cored solder is suitable for soldering medium sized joints?

- A) 22 gauge rosin cored
B) 24 gauge rosin cored
C) 16 gauge rosin cored
D) 18 gauge rosin cored

24. Which ratio of tin-lead combination is used for electronic component soldering work?

- A) 20:40
B) 60:40:00
C) 40:60
D) 63:37:00

25. In computer processing data, which table maintain the size of the partition?

- A) Program table
B) Process table
C) Procedure table
D) Partition table

26. What is the input impedance of IGBT?

- A) Low
B) Unity
C) High
D) Infinity

27. How the overlapping of excess sheet metal causing bulge at seam and edge is prevented?

- A) Notches
B) Square stake

- C) Mallet
D) L - angles

28. What is the percentage of conductivity of electric current in aluminium?

- A) 0.47
B) 0.56
C) 0.76
D) 0.22

29. What type of control is used for FET?

- A) Resistance controlled device
B) Voltage controlled device
C) Frequency controlled device
D) Current controlled device

30. Which is the N - channel FET?

- A) Main current flows through N-doped material
B) Main current flows through P-doped material
C) AC supply connected to drain termin
D) S-terminal connected to positive

31. How gate is biased in JFET?

- A) Reverse biased
B) AC supply function
C) Dual supply function
D) Forward biased

32. What in the current gain of a common ? base amplifier?

- A) Infinity
B) Greater than 1
C) Less than 1
D) Unity

33. What is the term stands for TRIAC?

- A) Triode Access console
B) Triode Alternate control
C) Triode DC semiconductor
D) Triode AC semiconductor

34. What is the full form of the abbreviation ISA?

- A) Industry System Architecture
B) Institution Standard Architecture
C) Industry Software Architecture
D) Industry Standard Architecture

35. What is the use of battery analyzers with rapid-test program?

- A) Test the load current delivered
B) Test the charging current of battery
C) Indicate the health condition of battery
D) Test the battery life

36. What is the specified V_{CC} voltage of 4 bit digital switch with 4 independent lines?

- A) 4.5 V to 5.5 V
B) 5.0 V to 7.5 V
C) 2.3 V to 3.6 V
D) 1.5 V to 2.2 V

37. What is the decimal conversion number for the octal number (2374)₈?

- A) (1296)10
- C) (1286)10

- B) (1276)10
- D) (1266)10

- A) Partial change codes
- C) Change codes

- B) Permanent codes
- D) Temporary codes

38. What is the electrolyte level maintained above the top of the plates in lead acid battery cells?

- A) 10 mm to 15 mm
- C) 16 mm to 25 mm
- B) 5 mm to 8 mm
- D) 2 mm to 4 mm

39. Which meter movement is not affected by stray magnetic fields?

- A) MI meter - Repulsion type
- C) PMMC meter
- B) Thermo couple meter
- D) MI meter - attraction type

40. Which measuring instrument is used to make quick test on a TRIAC?

- A) Ohmmeter
- C) Ammeter
- B) Oscilloscope
- D) Voltmeter

41. Which circuits requires the flip - flops for their operation?

- A) Oscillator circuits
- C) Memory circuits
- B) Amplifier circuits
- D) Modulator circuits

42. How the performance of the amplifier designed using the simulation software is tested?

- A) Using measuring equipments
- C) Using virtual instrumentation testing
- B) Using multimeter
- D) Using test and measuring equipments

43. Which material is used to make LDR for lower end requirements?

- A) Cadmium sulfide
- C) Copper sulfide
- B) Aluminium sulfide
- D) Zinc sulfide

44. Which impurity is added to pure semiconductor to form N-type material?

- A) Indium
- C) Arsenic
- B) Gallium
- D) Boron

45. Which meter uses a moving coil for measurement?

- A) MI attraction type
- C) MI repulsion type
- B) LCR meter
- D) PMMC meter

46. Why the soft iron pieces in the moving iron meter is tongue shaped?

- A) To achieve uniformity of scale
- C) To damp the oscillations
- B) To generate heat
- D) To produce magnetic attraction

47. Which codes are stored in computer ROM BIOS chip?

48. What is the efficiency transformer coupled class A amplifier?

- A) Unity
- C) More than 60%
- B) Less than 20%
- D) About 50%

49. What is the forward voltage for the single colour orange LEDs?

- A) 2 V
- C) 0.8 V
- B) 2.5 V
- D) 0.5 V

50. Which device is used to test the fully charged condition of a lead acid battery cell?

- A) High rate discharge tester
- C) Multimeter
- B) Hydrometer
- D) DC voltmeter

51. What is the relation of wire diameter with current carrying capacity of conductor?

- A) Wire gets less heat
- C) Inversely proportional
- B) Directly proportional
- D) Drops more voltage across it

52. What is the rated output voltage of a silver oxide cell?

- A) 4.0 VDC
- C) 1.5 VDC
- B) 1.0 VDC
- D) 2.5 VDC

53. What will happen if the photo resistor (LDR) is exposed to low level light condition?

- A) Resistance will decrease to 100 Ohm
- C) Resistance will increase to around 1 Mega Ohm
- B) Resistance will increase to 1 Kilo Ohm
- D) Resistance will decrease to 10 Ohm

54. What is the purpose of vacuum contactors in electrical panel?

- A) Packet switching
- C) Slow switching
- B) Medium switching
- D) Fast switching

55. Which battery is used for cellular phones?

- A) Sodium sulphur
- C) Zinc chloride
- B) Lithium ion
- D) Nickel ion

56. What is the full form of the abbreviation MOSFET?

- A) Metal organic serial FET
- C) Metal oxide semiconductor FET
- B) Medium oscillator signal FET
- D) Minimum output signal FET

57. Which parameter is maintained constant in zener diode?

- A) Voltage
- C) Resistance

- B) Current
- D) Power

- C) No moving parts to wear and tear
- D) Spark generated during switching

58. What is the maximum emitter to base voltage VEB (max) for the transistor BC 147?

- A) 8V
- C) 4V
- B) 6V
- D) 5V

59. Which class of fire is classified involving metals?

- A) Class C
- C) Class D
- B) Class A
- D) Class B

60. Why the electronic device IGBT is preferred over the power MOSFET?

- A) Higher switching repetition rates
- C) Suitability for medium power applications
- B) Low switching speed
- D) Higher driving power requirement

61. How the pass band gain of the circuit is expressed?

- A) In hertz
- C) In volts
- B) In hertz
- D) In ampere

62. What is the gate current (I_g) of the JFET, when reverse biased?

- A) Practically zero
- C) Practically infinity
- B) Practically very low
- D) Practically unity

63. What is the effect of over heating on soldering a joint?

- A) Cold joint
- C) Poor wetting
- B) Dull grainy surface
- D) Flux trapped against lead

64. What is the cause of injuring at the time of lifting a load?

- A) Wrong lifting technique
- C) Object striking the load
- B) Heavy load
- D) Falling object

65. What is the peak to peak voltage in a bridge rectifier circuit with load current of 10 mA, capacitance of 470 F and 50 Hz supply frequency?

- A) 2.134 v
- C) 0.213 v
- B) 1.525 v
- D) 3.567 v

66. Which metal has very good conductivity of electric current?

- A) Gold
- C) Copper
- B) Aluminium
- D) Silver

67. How the solid state relays are working for increased lifetime?

- A) Slower in operations
- B) Bulky profile

68. What is the resonant frequency range of a crystal?

- A) Between 0.5 and 25 MHz
- C) Between 0.1 and 1MHz
- B) Between 0.1 and 10 MHz
- D) Between 0.5 and 30 MHz

69. What is the result of hysteresis loss in magnetic material?

- A) Eddy current decreases
- C) Back emf increases
- B) Magnetic flux increases
- D) Energy loss takes place

70. What is the package type for BF 245B?

- A) TO-102
- C) TO-92
- B) TO-72
- D) TO-82

71. What is the advantage of IGBT?

- A) It has low input impedance
- C) Low efficiency and slow switching
- B) High efficiency and fast switching
- D) IGBT is a gate current driven device

72. What is the power supply required to operate the most standard TTL ICs properly?

- A) - 1.5v to - 2.5V
- C) + 4.75v to + 5.25V
- B) + 7.5v to + 12V
- D) + 1.5v to +2.5V

73. Which electrical parameter opposes the flow of electrons?

- A) Current
- C) Resistance
- B) Voltage
- D) Power

74. Which process the ICS are made?

- A) Grown junction process
- C) Point contact junction process
- B) Micro photo - lithographic process
- D) Point contact junction process

75. How the movement of electrons through a conductor in a particular direction is called?

- A) Electric current
- C) Resistance
- B) Inductance
- D) Conductance

76. How the drive circuits for the power MOSFETs are coupled?

- A) Using logic circuitry
- C) Using pulse transformer
- B) Direct coupling method
- D) Using transistors

77. How many time constant period is required to fully charge a capacitor?

- A) 3 time constants
- C) 5 time constants
- B) 10 time constants
- D) 7 time constants

78. What is the maximum specified voltage for the TRIAC TIC 201D?

- A) 2.5 V
- B) 1.7 V
- C) 2.1 V
- D) 1.5 V

79. What is the purpose of wood rasp file?

- A) Finishing flat edges
- B) Cutting metals
- C) Preliminary rough work
- D) 90 Degree corners

80. Find the value of shunt resistance required for 1 mA meter to extend the range and measure 10 mA (RM = 27 Ohm) ?

- A) 3 Ohms
- B) 2 Ohms
- C) 1 Ohm
- D) 4 Ohms

81. What is the unit of inductance?

- A) Farad
- B) Joule
- C) Henry
- D) Watts

82. What is the current gain of common collector amplifier?

- A) Very high
- B) Medium
- C) High
- D) Low

83. Which is the package type for the JFET BFW10?

- A) TO-82
- B) TO-92
- C) TO-72
- D) TO-62

84. What is the percentage of conductivity of electric current in silver?

- A) 0.94
- B) 0.67
- C) 0.56
- D) 1

85. What is the output frequency of the pulsating DC in a two diode fullwave rectifier?

- A) Three times the input A/C frequency
- B) Half of the input A/C frequency
- C) Same frequency of the A/C input
- D) Double the input A/C frequency

86. What is the code number of TRIAC?

- A) 2N2646
- B) BT136
- C) 2N1597
- D) BFW10

87. What is the cause of burnt relay contacts?

- A) Excessive number of operations
- B) Excessive contact current
- C) Low contact current
- D) Chatter during a slow release

88. What is the purpose of using positive feed back in

amplifiers?

- A) To produce modulation
- B) To produce multiplexion
- C) To produce oscillation
- D) To produce demodulation

89. What type of feed back is used by the Wein-bridge oscillator to oscillate the signal?

- A) Positive feedback
- B) Both positive and negative feedback
- C) No feedback
- D) Negative feedback

90. Which bonding material is used for soldering a joint?

- A) Grease
- B) Oil
- C) Flux
- D) Acid

91. Which fire extinguisher is used to put off class C type of fire?

- A) Dry powdered
- B) Foam type
- C) Jet of water
- D) Carbon-di-oxide

92. What is the effect on the current flow with increased diameter of conductor?

- A) Resistance increases
- B) More voltage dropped
- C) Opposes more current
- D) Allows high current flow

93. What should be the time constant $t = RC$ for a good clamper circuit with reference to time period of the input signal?

- A) RC values should be at least ten times
- B) Half the time period of signal
- C) Double the time of signal frequency
- D) Five times the time period of signal

94. What is the information stored in digital registers?

- A) Decimal values
- B) Analog values
- C) Binary values
- D) Alphanumeric values

95. What is the effect on the transformer operated below the rated voltage?

- A) Delivers reduced secondary voltage
- B) Leads to interwinding leakage
- C) Burn out windings
- D) Transformer heated up excessively

96. What is the effect of electric shock at very low voltage levels (Less than 40v)?

- A) Fibrillation
- B) Unpleasant tingling sensation
- C) Burning of the skin
- D) Muscles contract

97. How the gas and liquefied gases are classified

- A) Class D fire
- B) Class C fire

C) Class B fire

D) Class A fire

98. How many time constants required to change a capacitor to 63.2% of its full charge voltage?

A) Two time constant

B) One time constant

C) Three time constant

D) Four time constant

99. What is the power dissipation of the standard TTL chip?

A) 5 mW/gate

B) 10 mW/gate

C) 15 mW/gate

D) 20 mW/gate

100. What is the additional advantage of rosin flux used for soldering electronic components?

A) It is good conductor

B) It is a chemical paste

C) Inorganic acid in nature

D) It is non-conductive

101. What is the main advantages of IGBT over BJT?

A) Superior current conduction capability

B) Thermal limits are pushed to the edge

C) Fast switching speed

D) Reverse bias secondary break downs

102. Which port is used to connect a plug and play peripheral device to CPU?

A) COM 1 port

B) USB port

C) RJ45 port

D) COM 2 port

103. Which electrode controls brightness of the image on the screen of oscilloscope?

A) Control grid

B) Anode

C) Cathode

D) Focussing electrode

104. Which component filter the ripples in the rectifier circuit?

A) Capacitor

B) Diode

C) TRIAC

D) DIAC

105. What is the term stands for TRIAC?

A) Triode Access console

B) Triode Alternate control

C) Triode DC semiconductor

D) Triode AC semiconductor

106. Which parameter of passive component can be calculated using the formula ?

A) Capacitance

B) Inductive reactance

C) Inductance

D) Capacitive reactance

107. What is the expansion of PRF related to frequency?

A) Pulse probability frequency

B) Power regulated frequency

C) Pulse repetition frequency

D) Pulse repetition frequency

108. Which band of frequency is used for RADAR in frequency spectrum allotted by the International Telecommunication Union (ITU)?

A) ITU band - 6

B) ITU band - 10

C) ITU band - 8

D) ITU band - 4

109. Which function control in CRO, adjust the trace sharper?

A) Intensity

B) Focus

C) Time/Div trigger

D) Amplitude (V/Div)

110. What is the use of clamper in electronic circuits?

A) For DC component restoration

B) For slicing both peaks

C) For positive peak clipping

D) For negative peak clipping

111. What is the name of the process of converting AC into DC voltage?

A) Demodulating

B) Inverting

C) Rectifying

D) Amplifying

112. What is the advantage of photo transistors over photo diodes?

A) Considerably lower sensitivity

B) Considerable greater sensitivity

C) Limit voltage handling capacity

D) Vulnerable to electrical sources

113. What is the function of opto-coupler in the switching operation of digital input signal?

A) Amplifier the signal

B) Produces electrical noise signal

C) Defects the operation of switching signal

D) Converts voltage into current

114. How many electrons are contained in coulomb of electric charge?

A) 6.25×10^{16} electrons

B) 6.25×10^{12} electrons

C) 6.25×10^8 electrons

D) 6.25×10^{18} electrons

115. Which fire extinguisher is used to put off class A type of fire?

A) Carbon-di-oxide

B) Foam type

C) Dry powdered

D) Jet of water

116. What is the full form of electronic component MOV?

A) Metal Oxide Varactor

B) Metal Over Varistor

C) Metal Over Varactor

D) Metal Oxide Varistor

117. Which semiconductor devices are composed inside the solid state relays?

- A) Diodes and transistors B) Thyristor and transistors
C) UJYs and FETs D) MOSFETs and IGBTs

118. How the single strand wire is called?

- A) Hook up wire B) Flexible wire
C) Multi strand wire D) Twisted wire

119. What is the name of multi-stage amplifiers?

- A) Darlington pair amplifier B) Cascaded amplifier
C) Cascoded amplifier D) Complementary symmetry amplifier

120. What is the reason for electric fire?

- A) Open circuit B) Deviation
C) Overloading D) Proper earthing

121. What is the maximum drain-source voltage, V_{DS} for the JFET BF 245B?

- A) 20 V B) 10 V
C) 30 V D) 40 V

122. What is the current rating of voltage regulator IC LM317L?

- A) 0.2 A B) 0.4 A
C) 0.3 A D) 0.1 A

123. Which method is used for blanketing with foam to extinguish the fire?

- A) Smothering B) Cooling
C) Starving D) Heating

124. How gate is biased in JFET?

- A) Dual supply function B) Reverse biased
C) Forward biased D) AC supply function

125. What is the code number of TRIAC?

- A) BFW10 B) 2N2646
C) 2N1597 D) BT136

126. When does the biased positive clipper remove the portion of input signal?

- A) During the negative half cycle of input B) Signal voltage is lesser than bias battery
C) Signal voltage becomes greater than bias battery voltage D) Signal voltage equals the bias battery voltage

127. What is the name of the process to maintain the recommended level of electrolyte in lead-acid battery cell?

- A) Cycling of the cell B) Recharging

- C) Topping up D) Charging the cell

128. Which circuits commonly use parallel-fed Hartley oscillators?

- A) Stereo amplifiers B) Television receivers
C) Automatic voltage stabilizers D) Radio receivers

129. Which IC package consists of 100 to 1000 transistors?

- A) Medium scale integration (MSI) B) Small scale integration (SSI)
C) Large scale integration (LSI) D) Very large scale integration (VLSI)

130. Which is the 3 terminal, negative voltage regulator IC?

- A) IC 7905 B) LM 340
C) LM 320 D) IC 7812

131. What is the main problem caused for severe pitting in relays?

- A) Low contact current B) Chatter during a slow release
C) Excessive contact current D) Excessive number of operations

132. What is the minimum current rating of four diode bridge rectifier to supply load current of 1.8 Amp?

- A) 1.8 Amp B) 5.0 Amp
C) 2.0 Amp D) 0.9 Amp

133. Which circuit photo SCR opto couplers are used?

- A) AC powered circuits B) Counter circuits
C) DC circuits D) Amplifier circuits

134. How the lamp failures caused by the high inrush currents in lamp dimmer circuits using TRIAC is eliminated?

- A) By soft start circuit B) By the fuse
C) Using Safety resistor D) Using MCB

135. At which condition the cold resistance of the low voltage lamp is measured using ohmmeter?

- A) Lamp is ON at 320 Degree Centigrade B) Lamp is ON at 100 Degree Centigrade
C) Lamp is ON at 400 Degree Centigrade D) Lamp is OFF at room temperature

136. What is the unit of electric charge?

- A) Coulomb B) Hertz
C) Volts D) Ampere

137. Which parameter controls the current flow in a BI-polar

transistor?

- A) Frequency
- B) Voltage
- C) Resistance
- D) Current

138. What is the maximum safe reverse voltage rating of a diode?

- A) Forward break down voltage
- B) PIV voltage
- C) Break down voltage
- D) Knee voltage

139. Which meter is used to find the exact resistance value of resistors?

- A) Ammeter
- B) Volt meter
- C) Watt meter
- D) Ohm meter

140. Which is electronic simulation software?

- A) MS Office
- B) AutoCAD
- C) Photoshop
- D) Macspice

141. What is the name of the procedure carried out to ensure the trustworthy standards of the measuring instrument?

- A) Calibration
- B) Testing standards
- C) Re-alignment
- D) Range test

142. Which characteristics enable the deflection of pointer in the attraction type moving iron meter?

- A) Deflection is inversely proportional to current
- B) Deflection is independent of current direction
- C) Weight of the soft iron pieces
- D) Deflecting and controlling torques are

143. What is the percentage of charge accumulated by the capacitor at the end of 2 time constant limit?

- A) 0.4
- B) 0.5
- C) 0.632
- D) 0.864

144. Which is the transistor used to operate the Colpitts oscillator?

- A) AC 188
- B) BC 148B
- C) AC 127
- D) BF 194B

145. What is the name of the pair of metal strips used in battery cell?

- A) Cathode
- B) Carbon rod
- C) Electrolyte
- D) Electrodes

146. Electrical conductivity of gold is

- A) 100%
- B) 67%
- C) 56%
- D) 94%

147. What is the defect on the soldered joint, if it is cooled by blowing air?

- A) Dull grainy surface
- B) Poor wetting
- C) Dry solder joint
- D) Pits and voids

148. What is the typical forward voltage drop of the yellow colour LED?

- A) 2.2 V
- B) 2.1 V
- C) 2 V
- D) 1.8 V

149. Which type of soldering is used for electronic circuit?

- A) Soft soldering
- B) Brazing
- C) Hard soldering
- D) Hot soldering

150. How much is the maximum load current of the negative voltage regulator IC 7912?

- A) 2.0 A
- B) 1.0 A
- C) 0.55 A
- D) 1.5 A

151. In which analog meter the battery is provided?

- A) Ammeter
- B) Ohm meter
- C) Voltmeter
- D) Watt meter

152. Which type of voltage regulator is IC 723?

- A) Three pin adjustable voltage regulator
- B) Three pin negative voltage regulator
- C) Multipin variable voltage regulator
- D) Three pin positive voltage regulator

153. Which type of amplifier is used to operate the loud speaker?

- A) Voltage Amplifier
- B) Power Amplifier
- C) IF Amplifier
- D) RF Amplifier

154. What is the effect of shaking the soldered joint while cooling?

- A) Flux will not dissolve
- B) It disturbs the chemical bonding take place
- C) It will corrode the joint
- D) It results in oxidation of solder

155. What type of arrangement is required to sustain the oscillations of the oscillator circuit?

- A) Increase the bias voltage
- B) Increase the value of inductor
- C) Provide regenerative feedback
- D) Provide negative feedback

156. Why the load testing is done on the lead-acid battery?

- A) Test the dimensional accuracy
- B) Verify the rated power delivery

C) Test I2R power loss in the battery cell
D) Measure the rated output voltage

C) Electrical energy into mechanical energy

D) Chemical energy into electrical energy

157. What is the input impedance of darlington pair transistors?

- A) Uniter
B) Very high input impedance
C) Medium input impedance
D) Very low input impedance

166. What will happen when the forward bias voltage across the PN junction is increased excessively?

- A) Barrier width of junction increases
B) Junction ruptured and short circuited
C) Increases the cut - in - voltage
D) No current flows through the junction

158. Why NPN type of transistors are preferred over the PNP type transistors?

- A) Low operating voltage
B) NPN has good bias stability
C) NPN has lower switching speed
D) NPN has higher switching speed

167. Which device is a unipolar transistor?

- A) FET
B) IGBT
C) UJT
D) BJT

159. Which type of toe caps are used to avoid crushing of feet at the time of shifting equipments?

- A) Rubber toe caps
B) Steel toe caps
C) Plastic toe caps
D) Leather toe caps

168. What is the typical forward voltage drop of the RED colour LED?

- A) 2 V
B) 2.2 V
C) 2.1 V
D) 1.8 V

160. How much time is required to make a quality soldered joint using soldering iron?

- A) 15 - 20 seconds
B) 10 - 15 seconds
C) 7 - 10 seconds
D) 3 - 7 seconds

169. Which is the property of IGBT?

- A) Significant power consumption
B) Low input impedance
C) High efficiency and fast switching
D) Low gate signal

161. Which material is used as electrical insulator?

- A) Porcelain
B) Aluminium
C) Gallium
D) Germanium

170. What is the maximum possible number of flip-flops in a decade counter?

- A) 3^n
B) 1^n
C) 2^{n+1}
D) 2^n

162. Which electrolyte is used in maintenance free lead acid batteries?

- A) Potassium electrolyte
B) Ceramic electrolyte
C) Sodium electrolyte
D) Gelled electrolyte

171. What is the drawbacks of LDR?

- A) More sensitive
B) Made of low resistance material with few holes
C) Cannot be used to determine precise light levels and specifications
D) Available different sizes

163. What is the full form of the abbreviation CD-ROM in computer?

- A) Connectivity Digital Read Only Memory
B) Compact Disk Read Only Memory
C) Classified Device Read Only Memory
D) Computer Disk Read Only Memory

172. Which energy is converted into electrical energy in hydropower stations?

- A) Mechanical energy
B) Chemical energy
C) Light energy
D) Heat energy

164. Which type of packaging is used to transistors utilized for medium power amplification?

- A) Metal packaging
B) Plastic packaging
C) Ceramic packaging
D) Plastic packaging with metal heatsinks

173. How many types of soldering is used for joining metal surfaces?

- A) Two
B) Five
C) Four
D) Three

165. Which energy is converted by the battery to produce electricity?

- A) Electrical energy into light energy
B) Mechanical energy into electrical energy

174. What is the overall base emitter voltage required to turn the darlington pair?

- A) 0.7 V
B) 0.3 V
C) 0.2 V
D) 1.4 V

175. What is the purpose of damping torque in PMMC meter?

- A) Control the jewel bearing
- B) Control the magnetic field
- C) Control the swinging of the coil
- D) Control the pivot point

176. Which configuration of transistor amplifier is most commonly used in electronic circuits?

- A) Common base configuration
- B) Common collector configuration
- C) Common emitter configuration
- D) Common drain amplifier configuration

177. Which step is important for soldering a joint?

- A) Pasting the joint
- B) Heating the joint
- C) Cleaning the joint
- D) Cooling the joint

178. What is produced by the power supply connected soldering iron?

- A) Heat
- B) Fire
- C) Cool air
- D) Water vapour

179. Which is the combination of photo transistor?

- A) Photo transistor and DIAC
- B) LASER diode and pin diode
- C) Photo diode and transistor
- D) Photo resistor and TRIAC

180. What is the disadvantage of the two diode full wave rectifier compared with a bridge rectifier?

- A) The need of bulky transformer
- B) The ripple frequency is higher
- C) Each diode carries half the load current
- D) DC output level is higher

181. Which type of clipper is that a small portion of the negative half cycle of signal is removed?

- A) Combination clipper
- B) Biased positive clipper
- C) Positive clamper
- D) Biased negative clipper

182. Which electrical quantity is directly proportional to the current carrying capacity of the conductor?

- A) Conductor's shape
- B) Conductor's diameter
- C) Wire resistance
- D) Passing current

183. What is the name of the motion of charged particles in any medium?

- A) Voltage
- B) Resistance
- C) Frequency
- D) Current

184. What is the meaning of first letter indicated in the transistor code number BC 107?

- A) Silicon material used
- B) Germanium material used
- C) Antimony material used
- D) Indium material used

185. What type of packaging is generally used to transistors utilized for low power amplification?

- A) Ceramic packaging
- B) Plastic packaging with metal heatsinks
- C) Metal packaging
- D) Plastic packaging

186. How the flux residue is removed after soldering a joint?

- A) Organic flux
- B) Petrol
- C) Water
- D) Isopropyl alcohol

187. What is the decimal number for the binary number 0101?

- A) 5
- B) 7
- C) 6
- D) 4

188. In which quantity affects the Q point of a transistor amplifier?

- A) Mismatching signals
- B) Proper biasing methods
- C) Decreased temperature
- D) Increased temperature

189. Which is the additional percentage of power delivered by the lithium Ion compared to NiMH battery?

- A) 0.15
- B) 40%
- C) 60%
- D) 25%

190. What is the effect on a secondary cell supplying current to the load?

- A) Unloading
- B) Discharging
- C) Charging
- D) Leaking

191. What is the purpose of using IC74LS190?

- A) Up/down counter
- B) Attenuator
- C) Comparator
- D) Modulator

192. Why the solvent Iso Propyl Alcohol (IPA) is used on the solder joint?

- A) To help the corrosive action
- B) Remove residual flux and prevent corrosion
- C) To break down the acid within the joint
- D) Cleaning before soldering the joint

193. What is the shape of prohibition sign?

- A) Circular
- B) Rectangular
- C) Square
- D) Triangular

194. Where the programs and datas are stored after execution in computer?

- A) Chip set
- C) Processor

- B) Memory
- D) Buffer

- A) Serving as an oscillator
- C) Serving as comparator

- B) Serving as an oscillator
- D) Acting as transducers

195. Find the total resistance value of 10 ohms and 20 ohms connected in parallel.

- A) 66.66 Ohms
- C) 6.666 Ohms

- B) 6666 Ohms
- D) 666.6 Ohms

196. Which angle is checked by the try square?

- A) 90 Degree
- C) 75 Degree

- B) 60 Degree
- D) 45 Degree

197. In which arrangement the high value of resistor is connected to extend the range of voltmeter?

- A) Series
- C) Delta

- B) Parallel
- D) Star

198. How many transistors are built inside the Very Large Scale Integration (VLSI) IC package?

- A) 10 to 100 transistors
- C) 1 to 10 transistors

- B) 1000 and above
- D) 100 to 1000 transistors

199. What is the maximum forward gate current (I_g) for BFW10 JFET?

- A) 10 mA
- C) 20 mA

- B) 8 mA
- D) 5 mA

200. What is the use of flip - flop?

- A) It stores energy
- C) It stores voltage

- B) It stores binary information
- D) It stores current

201. What is the use of schmitt trigger circuit?

- A) AC to DC converter
- C) Electronic thermostant

- B) AC to DC converter
- D) Voltage regulator

202. What is the maximum current ratings of solid state relays available in high power packages?

- A) 1 Amp
- C) 10 Amp

- B) 40 Amp
- D) 100 Amp

203. Why transistors made of silicon is preferred over the germanium semiconductor material?

- A) Requires complicated bias arrangement
- C) Silicon transistor needs low cut-in-voltage

- B) Higher thermal stability
- D) Complex design

204. What is the function of astable multivibrator in timer IC 555?

205. How the single strand wire is called?

- A) Multistrand wire
- C) Flexible wire

- B) Twisted wire
- D) Hook - up wire

206. Which signal is sent by the SMPS to computer mother board?

- A) Power good signal
- C) Device signal

- B) Peripheral signal
- D) Processor signal

207. Which artificial respiration method to be avoided to a person with abdomen injury?

- A) Mouth-to-nose method
- C) Schafer's method

- B) Mouth-to-mouth method
- D) Nose-to-mouth method

208. What is the name of defect if the flux is unable to remove the tarnish from the soldered joint?

- A) Poor wetting
- C) Cold joint

- B) Pits and voids
- D) Dull gravity surface

209. What is the function of clipper circuit?

- A) Wave shaping
- C) Rectification

- B) Regulation
- D) Amplification

210. What is the name of flux used for soldering electronic components?

- A) Resin
- C) Mild acid

- B) Organic acid
- D) Rosin

211. What is the output pulse frequency of the full wave rectifier with input frequency of 50 Hz?

- A) 200 Hz
- C) 40 Hz

- B) 60 Hz
- D) 100 Hz

212. Why the plunger desoldering tool needs periodical cleaning?

- A) To prevent clogging of the nozzle
- C) To remove the flux collected in chamber

- B) To melt the solder quickly
- D) To help the joint to be soldered

213. What is the purpose of standard wire gauge (SWG)?

- A) Measure insulation of wire
- C) Measure voltage

- B) Measure current
- D) Measure diameter of wire

214. Which type of amplifier is used to operate the loud speaker?

- A) RF amplifier

- B) IF amplifier

C) Voltage amplifier D) Power amplifier

215. What is the specific gravity of concentrated sulphuric acid?

A) 1.945 B) 1.245
C) 1.835 D) 1.175

216. What is the unit of electric charge?

A) Hertz B) Coulomb
C) Ampere D) Volts

217. What is the use of photo transistor?

A) Used as light controlled switch B) Used as oscillator
C) Used in comparator circuit D) Used as demodulator

218. What is the use of screw driver?

A) Tighten or loosen screws B) Tighten or loosen bolts
C) Hold the screws D) Tighten or loosen rivets

219. Which component opposes any change in current?

A) Inductor B) Diode
C) Capacitor D) Resistor

220. What is the digital signal value for the analog signal value 6V?

A) 100 B) 110
C) 101 D) 111

221. Which insulation layer is used in MOSFET?

A) Germanium material B) Arsenic material
C) Silicon-di-oxide D) Antimony material

222. What is the minimum forward current I_f for single colour LEDs?

A) 10 MA B) 30 MA
C) 20 MA D) 5 MA

223. Which is the output pin number IC 555 timer?

A) Pin number 6 B) Pin number 3
C) Pin number 5 D) Pin number 5

224. What is the reason for the use of contactors in control circuits?

A) Supply power to loads B) To decrease load current
C) To protect the load from arcing D) To increase load current

225. Which part of the relay causes most trouble?

A) Frame and core B) Hinges
C) Relay contacts D) Relay coil

226. What is the gate current (I_g) of the JFET, when reverse biased?

A) Practically infinity B) Practically zero
C) Practically unity D) Practically very low

227. Which section is used by the processor to save instructions?

A) Memory B) Graphics card
C) System unit D) Micro processor

228. Which factor influences the severity of electrical shock?

A) Very low DC voltage B) Duration of current passing
C) Level of current in micro ampere D) Person receives the shock

229. Which material is used to make photo resistors (LDR)?

A) Aluminium B) Germanium
C) Cadmium sulfide D) Silicon

230. Which formula is used to find the conductance?

A) Q / V B) I / V
C) V / I D) $I \times R$

231. What is the advantage of MOSFET?

A) Very low on-state voltage B) Low driving power
C) Low gate signal power requirements D) Superior current conduction capability

232. What is the name of the ratio of ON-time pulse to the OFF-time pulse of multivibrator?

A) Threshold comparator B) Pulse repetition
C) Pulse repetition D) Control voltage

233. What is the colour code for 100 Ohm resistor?

A) Brown, brown, brown B) Black, brown, black
C) Brown, black, brown D) Brown, black, red

234. Which diode is used in low power communication circuits?

A) Signal diodes B) Switching diodes
C) High power diodes D) Rectifier diodes

235. Which tool is used for seaming the funnel like taper?

A) Blow horn stake B) Hatchet stake
C) Angle steel D) Vices

236. Why the transformer core is made as thin laminations?

- A) To minimize eddy current losses
- B) To increase core saturation losses
- C) To increase the hysteresis losses
- D) To maximize eddy current losses

237. Which metal has very good conductivity to the electric current?

- A) Copper
- B) Aluminium
- C) Silver
- D) Gold

238. Which material is used to make LDR for higher end requirements?

- A) Copper sulfide
- B) Lead selenide
- C) Zinc sulfide
- D) Cadmium sulfide

239. Which circuit uses photo-darlington devices?

- A) Counter circuits
- B) DC circuits
- C) AC powered circuits
- D) Amplifier circuits

240. Which soldering instrument has hot air blowing facility?

- A) Soldering station
- B) Soldering iron
- C) Wave soldering machine
- D) Temperature controlled soldering iron

241. What is the phase relationship between the applied voltage and current in the primary of a transformer with open secondary winding?

- A) Current lags voltage by 90 Degree
- B) Voltage leads current by 45 Degree
- C) Current leads voltage by 90 Degree
- D) Voltage lags current by 45 Degree

242. How many gauge numbers in SWG, changed to double the cross section area of the conductor?

- A) Three gauge sizes decreased
- B) Two gauge sizes decreased
- C) Five gauge sizes increased
- D) Four gauge sizes increased

243. Which material conducts electricity?

- A) Glass
- B) Copper
- C) Mica
- D) Paper

244. What is the percentage of conductivity of electric current in copper?

- A) 1
- B) 0.56
- C) 0.94
- D) 0.67

245. What is the advantage of using digital multimeter?

- A) Linear scale
- B) Logarithmic scale

C) Accuracy

D) Easy portability

246. Which purpose the cadmium sulfide cells (CDS cells) are used?

- A) Voltage dependent resistor
- B) Rechargeable cells
- C) Primary cells
- D) Light dependent resistor

247. Which materials are used for semiconductor?

- A) Silicon and germanium
- B) Arsenic and antimony
- C) Silver and aluminium
- D) Gallium and indium

248. How many ohms is equal to one Mega ohm?

- A) 10 kW
- B) 100 kW
- C) 1000 kW
- D) 2000 kW

249. Which factor determines the inductance value?

- A) Diameter of the coil
- B) Frequency of the current
- C) Current flow through the coil
- D) Material of the coil

250. What is the maximum specified voltage for the TRIAC TIC 201D?

- A) 2.5 V
- B) 2.1 V
- C) 1.5 V
- D) 1.7 V

251. What is the name of instrument used to measure electrical quantities?

- A) Meter
- B) Tester
- C) Tester
- D) Vernier caliper

252. How the insulation coating stays without damage, even on bending the wire?

- A) Due to the strength of the wire material
- B) Due to elastic property of insulation
- C) Due to high current flow
- D) Due to wire resistance

253. When does the complementary metal oxide type MOSFET configuration consumes power?

- A) During switching
- B) Always consumes power
- C) Never consumes power
- D) While it holds its state

254. What is the forward voltage drop of single colour Red LED?

- A) 2.1 V
- B) 1.8 V
- C) 2.2 V
- D) 2 V

255. How the thick layers of oxide is removed before doing the soldering activity?

- A) Use abrasive method
- B) Clean normally

- C) Use Isopropyl Alcohol D) Apply flux

256. How many layers of PN - junctions are used in SCR fabrication?

- A) Three layer four junctions B) Two layer two junctions
C) Three layer three junctions D) Four layer three junctions

257. Which circuit uses the F to V converter section?

- A) Schmitt trigger circuit B) Up/down counter circuit
C) Digital frequency meter circuit D) Digital frequency meter circuit

258. Why the complementary - symmetry amplifier is preferred over the other types of amplifier configurations?

- A) To get more voltage gain B) To minimize the gain
C) To eliminate the transformer D) To get less distortion

259. What is the formula used to calculate the current gain (alpha) of common base amplifier?

- A) I_B / I_E B) I_C / I_E
C) I_E / I_C D) I_E / I_C

260. Where does the depletion region exists in a bipolar transistor?

- A) Between E-B and B-C electrodes B) Between collector and emitter electrodes
C) Between emitter - base electrodes D) Between collector - base electrodes

261. What are the fundamental properties of insulation materials?

- A) Low resistance and thermal heat B) Insulation resistance and dielectric strength
C) Length and cross sectional area D) Temperature and electrical hazards

262. Which electrical property opposes the flow of electrons?

- A) Resistance B) Power
C) Voltage D) Current

263. Which coding system for transistor type numbering system is followed by American standard?

- A) PRO-ELECTRON standard B) Home codes
C) JIS standard D) JEDEC standard

264. What is the power dissipated if 10mA current flows through a 10K Ohm resistor?

- A) 4000 milli watts B) 3000 milli watts
C) 1000 milli watts D) 2000 milli watts

265. Which value is equal to one picofarad?

- A) 1012 Farad B) 10-12 Farad
C) 106 Farad D) 10-6 Farad

266. What is the purpose of covering provided over the electrical conductor?

- A) Protection against weather B) Reduce current flow
C) Decrease voltage rating D) Increase current flow

267. What is the voltage gain in a transistor if the input voltage in 40mv and the output voltage in 3.6V?

- A) 180 B) 270
C) 45 D) 90

268. What is the maximum power dissipation for a 555 IC?

- A) Above 800 mW B) Exactly 300 Mw
C) Exactly 300 Mw D) Below 500 mW

269. What is the name of the circuit that shifts the waveform upward or downward without disturbing its shape?

- A) Biased clipper circuit B) Clipper circuit
C) Combination clipper circuit D) Clamper circuit

270. Which material contains eight electrons in valency layer?

- A) Conductors B) Insulators
C) Semiconductors D) Intrinsic semiconductors

271. Which component is used to prevent over voltage of AC supply in SMPS?

- A) Wire wound resistor B) Metal oxide varistor
C) Metal film resistor D) Carbon film resistor

272. Which space is used to design circuit in schematic editor of the Tina software?

- A) Components groups space B) File operation space
C) Components type space D) Circuit work space

273. What is the difference of Colpitts oscillator compare to Hartley oscillator?

- A) Uses SCR combination B) Uses split inductor
C) Uses crystal oscillator D) Uses split capacitor

274. What is the maximum power dissipation Pmax for BF 245B?

- A) 300 mw B) 200 mw
C) 100 mw D) 400 mw

275. Which application the clamper circuit is used in electronics?

- A) Power supplies
- B) Storage counters
- C) Radars
- D) Radio receivers

276. Which type of transistors are required to amplify signals from the microphone /transducer?

- A) Epitaxial versa watt transistors
- B) High power transistors
- C) Medium power transistors
- D) Low power transistors

277. Which current flows in TRIAC between MT1 and MT2?

- A) Reverse current
- B) Leakage current
- C) Conventional current
- D) Principal current

278. What is stationary electric charges?

- A) Static charges
- B) Chemical charges
- C) Kinetic charges
- D) Electrical charges

279. What is characteristics of instrumentation amplifier?

- A) Infinity output impedance
- B) Low input impedance
- C) High input impedance
- D) High input impedance

280. Which circuit uses the enhancement type MOSFET?

- A) Integrated MOS switching circuits
- B) High frequency switching circuits
- C) Low power oscillator circuits
- D) High power amplifier circuits

281. How the active and passive components are added in the circuit using simulation software?

- A) Clicking from the similar circuit
- B) Clicking on the list of components
- C) Copy and paste from similar circuit
- D) Clicking on the component group

282. What is the propagation delay of the standard TTL chip?

- A) 12 ns
- B) 10 ns
- C) 8 ns
- D) 5 ns

283. What is the first step to rescue the person in electrical contact?

- A) Pull the person from electrical contact
- B) Break the contact
- C) Call the doctor
- D) Switch OFF power supply

284. How the insulators are called?

- A) Molecules
- B) Dielectrics
- C) Semiconductors
- D) Thyristors

285. At which temperature the 6040 solder start meeting?

- A) 100 Degree Centigrade
- B) 200 Degree Centigrade
- C) 380 Degree Centigrade
- D) 300 Degree Centigrade

286. Which shortcut key function is used to close the working window on the computer?

- A) Shift + F3
- B) Ctrl + S
- C) Alt + F4
- D) Ctrl + P

287. Which current flows in TRIAC between MT1 and MT2?

- A) Conventional current
- B) Reverse current
- C) Principal current
- D) Leakage current

288. Which device generates high frequency radio frequency indeferences by the extremely rapid turn-ON time?

- A) Transistor
- B) TRIAC
- C) Op-Amp
- D) UJT

289. Which port is used to connect the HDD on the mother board?

- A) IDE port
- B) Floppy drive port
- C) Com 2 port
- D) Com 1 port

290. Which cores are used in intermediate frequency transformers?

- A) Cobalt
- B) Steel
- C) Ferrite
- D) Nickel

291. How many Op-Amps are fabricated inside the LM 324 IC pack?

- A) Three Op-Amps
- B) Three Op-Amps
- C) Five Op-Amps
- D) Two Op-Amps

292. Which characteristics exhibits the current conduction increases while the voltage across the devices decreases in a DIAC?

- A) Linearity characteristics
- B) Negative resistance characteristics
- C) Positive resistance characteristics
- D) Nonlinearity characteristics

293. Which is the first step followed in troubleshooting of electronic circuit?

- A) Mechanical test
- B) Physical and sensory test
- C) Chemical test
- D) Thermal test

294. How the mechanical zero error of panel meter is corrected?

- A) By replacing moving coil
- B) By replacing moving coil
- C) Keeping the meter in vertical position
- D) By replacing pointer

295. Which circuit is used to clip portion of both positive and negative half cycle of input signal voltage?

- A) Combination clipper circuit
- B) Unbiased clipper circuit
- C) Biased positive clipper circuit
- D) Biased negative clipper circuit

296. What is the lowest voltage level of discharging the lead-acid battery?

- A) 1.7 V
- B) 1.5 V
- C) 1.2 V
- D) 1.85 V

297. What are the uses of simulation softwares?

- A) Design a circuit
- B) Solder and desolder components
- C) Design and test a circuit
- D) Replace defective components

298. Which bearing is supporting the shaft of moving coil assembly in a PMMC instrument?

- A) Jewelled bearings
- B) Steel bearings
- C) Gun metal bearings
- D) Bush bearings

299. How the light sensitive photo transistor enclosed inside a tight package is activated?

- A) By the light sensitive receiver inside
- B) By IR light produced inside the package
- C) By the external signal to the transistor
- D) By the bias voltage to the photo transistor

300. How the circuit schematic drawn using the simulation software is tested?

- A) Using multimeter
- B) Using external oscilloscope
- C) Using virtual oscilloscope
- D) Using analysis menu

301. What is the effect on the output voltage in a bridge rectifier circuits, with one diode open?

- A) Half of the rated output voltage
- B) Very low voltage
- C) No output DC voltage
- D) Full output rated voltage

302. What is the output produced in the ADC circuit?

- A) Triangular wave output
- B) Triangular wave output
- C) Analog output
- D) Sinewave output

303. Which device is used to produce hard copy of a document in a computer?

- A) Speaker
- B) Modem
- C) Monitor
- D) Printer

304. Which three terminal voltage regulator IC has adjustable output?

- A) LM 305
- B) LM 105
- C) LM 317
- D) LM 100

305. Which is the drain current (I_d) in JFET?

- A) Electron from source to drain
- B) Electron from drain to source
- C) Electron from drain to gate
- D) Electron from gate to source

306. How many operational amplifiers are fabricated in the LM741 IC?

- A) One Op-Amp
- B) Four Op-Amps
- C) Two Op-Amps
- D) Two Op-Amps

307. Which rechargeable cell is designed with conductive polymer?

- A) Plastic cell
- B) Nickel metal hydride cell
- C) Gelled electrolyte lead acid cell
- D) Lead acid cell

308. How the maximum permissible voltage that can be applied across the collector ? Emitter junction of a transistor is indicated?

- A) VCB (max) in volts
- B) VCC in volts
- C) VCE (max) in volts
- D) VBE (max) in volts

309. How batteries are classified?

- A) Button cells and lithium cells
- B) Cylindrical cells and rectangular cells
- C) Dry cells and alkaline cells
- D) Primary cells and secondary cells

310. Which type of defects are occurring in solid state relays?

- A) Tendency to fail open
- B) More sparking
- C) Tendency to fail shorted
- D) Intermittent working

311. Which is the N - channel FET?

- A) Main current flows through N-doped material
- B) AC supply connected to drain termin
- C) S-terminal connected to positive
- D) Main current flows through P-doped material

312. Which device converts digital data from computer into analog data and transmit through telephone line?

- A) Cache memory
- B) Processor
- C) Chipset
- D) MODEM

313. Which is the major factor determines the quality performance of A/D converter?

- A) Depends on data latch B) Conversion cycle
C) Measuring parameter D) Measuring parameter

314. Which tool is used to measure the size of wire?

- A) Feeler gauge B) Steel rule
C) Standard wire gauge D) Try square

315. What is the type of transistor BPX81?

- A) Audio frequency transistor B) NPN - Photo transistor
C) PNP - Photo transistor D) Uni - Junction transistor

316. Which terminal of the meter is connected for measuring electrical quantity?

- A) Pointer mechanism B) Input terminal
C) Output terminal D) Output terminal

317. What is the maximum blocking voltage of very high current handling IGBT modules?

- A) 440 V B) 1000 V
C) 6000 V D) 5000 V

318. Which torque is used in PMMC meter movement?

- A) Moderate torque B) Insufficient torque
C) Low torque D) High torque

319. How is the soldering method used for joining large metal called?

- A) Soft soldering B) Hot soldering
C) Brazing D) Welding

320. What is the important feature of instrumentation amplifier?

- A) Increase the output voltage B) Reduce the output off set voltage
C) Low gain accuracy D) Low gain accuracy

321. How many inputs are available in the 7447 BCD-to-seven segment decoder used to drive the LED display?

- A) One B) Four
C) Eight D) Seven

322. Which class of amplifier uses fixed bias because of its important advantage of transistor will never go to saturation?

- A) Class - A B) Class - AB
C) Class - B D) Class - C

323. What is the advantage of using bias in transistor circuits?

- A) Easily sets saturated B) Gives maximum distortion

- C) Never reach saturation D) Provides positive feed back

324. What is the name of the circuit that shifts the original signal in a vertical upward direction?

- A) Positive clamping circuit B) Combination clipper circuit
C) Peak clipper circuit D) Negative clamping circuit

325. Which mouse action is used to move an object from one location to another?

- A) Drag and drop B) Double clicking
C) Right clicking D) Left clicking

326. Which is the device made and interconnected by two transistors?

- A) LED B) SCR
C) UJT D) FET

327. Which control is used in repulsion type moving iron instrument to keep the pointer at zero position?

- A) Magnetic repulsion control B) Spring control
C) Air damping control D) Magnetic attraction control

328. Which material is used for making instrument cabinets?

- A) Hard rubber B) Sheet metal
C) Wood D) Plastic

329. What is the rated voltage of a single cell in lead acid battery?

- A) 2.0 V B) 2.2 V
C) 1.5 V D) 12 V

330. Which step is followed for treating a person from electric shock?

- A) Keep the victim cold B) Move the victim to a ventilated place
C) Provide water D) Cover the victim with a coat

331. Which parameter is used in the working of moving coil meter?

- A) Stray magnetic fields B) Eddy current damping
C) Spring control D) Permanent magnetic fields

332. How to improve the frequency stability in oscillator circuits?

- A) Using L and C B) Improve the property of circuits

C) By using quartz crystal
D) Increase the supply voltage

A) 40%
B) 25%
C) 12%
D) 27%

333. Which measuring instrument is used to check the working condition of a photo resistor (LDR)?

A) Ammeter
B) Oscilloscope
C) Ohmmeter
D) Voltmeter

343. Which metal coating is used on compact disk?

A) Nickel
B) Aluminium
C) Chromium
D) Silver

334. Which unit is used to measure capacitance value?

A) Henry
B) Ohm
C) Mho
D) Farad

344. What are the basic components required for a clipping circuit?

A) Capacitor and resistor
B) Transistor and diode
C) Diode and resistor
D) Diode and capacitor

335. What is successive approximation (SAR)?

A) Method of SMT
B) Method of IC fabrication
C) Method of D/A conversion
D) Method of D/A conversion

345. What is the colour of positive electrode in fully charged lead acid battery?

A) Reddish brown
B) Spongy grey colour
C) Grey colour
D) Red colour

336. What is the range of current rating of lead acid batteries used in automobiles?

A) 2.5 to 4.5 Amp
B) 5 to 10 Amp
C) 10 to 25 Amp
D) 100 to 400 Amp

346. Find the total inductance value of two inductors 10H and 15H of connected in series.

A) 25 H
B) 10 H
C) 05 H
D) 15 H

337. Which method is followed to troubleshoot the problem causing section by the symptom?

A) Logical approach method
B) Trial and error method
C) Sensory test method
D) Step by step method

347. What is the name of Multi-turn potentiometers?

A) Multi turn trim pots
B) Single turn trim pots
C) Single turn dual pots
D) Multi turn dual pots

338. What is the minimum current ratings of solid state relays available in low power packages?

A) 50 milli Ampere
B) Few micro Amperes
C) 100 milli Ampere
D) 10 milli Ampere

348. What is the shape of warning sign board?

A) Hexagonal shape
B) Circular shape
C) Triangular shape
D) Square shape

339. What is the advantage of silicon over germanium for transistor fabrication?

A) Lower thermal stability
B) Higher amplification factor
C) Lower operating voltage
D) Higher thermal stability

349. What is the minimum current ratings of solid state relays available in low power packages?

A) 50 milli Ampere
B) 10 milli Ampere
C) Few micro Amperes
D) 100 milli Ampere

340. What is the full form of the abbreviation SPDT used in switches?

A) Single Pole Double Throw
B) Single Pole Single Throw
C) Shared Pole Double Throw
D) Single Phase Dual Throw

350. The speed of spindle motor rotates inside the hard disk

A) 3600 to 7200 r.p.m
B) 4000 to 800 r.p.m
C) 3500 to 6000 r.p.m
D) 2500 to 5000 r.p.m

341. Which of the device is opto-coupled TRIACS?

A) B3202
B) BT136
C) 2N2648
D) MOC3020

351. What is the natural shape of a quartz crystal?

A) Pentagonal prism with pyramid at ends
B) Cylindrical shape with pyramid at ends
C) Hexagonal prism with pyramid at ends
D) Cube shape with pyramid at ends

342. What is the percentage of sulphuric acid in electrolyte used for lead-acid batteries?

352. Which tool works on the principle of air suction?

A) Soldering iron
B) Soldering wick
C) Desoldering braid
D) Desoldering pump

353. What is the maximum drain current, I_D for BF 245B?

- A) 25mA
- B) 35mA
- C) 15mA
- D) 45mA

354. Which software is used to simulate electronic circuits?

- A) Multi sim
- B) Photo shop
- C) Auto cad
- D) MS office

355. What is the switching speed of solid state relays?

- A) 1 to 100 nano seconds
- B) 1 to 25 nano seconds
- C) 1 to 100 milli seconds
- D) 10 to 60 nano seconds

356. When does the zener diode begins to conduct in the reverse biased condition?

- A) When bias voltage reached 0.7V
- B) After the barrier voltage cancelled
- C) Voltage across zener reached 0.3V
- D) Voltage across it reached the zener voltage

357. Which IC is used for (DEMUX) function in data transmission?

- A) IC 7483
- B) 74 LS 138
- C) 74 LS 151
- D) IC 7486

358. Which material is used for negative terminal of alkaline manganese dioxide batteries?

- A) Zinc
- B) Nickel hydroxide
- C) Lithium
- D) Cadmium

359. Which battery is made from non-toxic materials?

- A) Lithium ion (Li-Ion)
- B) Lithium polymer (Li-Poly)
- C) Nickel cadmium (Nicaid)
- D) Nickel metal hydride (NiMH)

360. What is the advantage of IGBT?

- A) Low driving power
- B) Used to isolate logic circuits
- C) Fast switching speed
- D) Low gate signal power

361. What is the meaning of maximum safe reverse voltage across a diode?

- A) Reverse break down voltage
- B) PIV voltage
- C) Knee voltage
- D) Break down voltage

362. How to overcome the problem of frequency drift in LC oscillators?

- A) Using high Q coils and good quality capacitors
- B) Apply opposite polarity of signal
- C) Provide negative feedback
- D) Increase the supply voltage

363. How many alternating layers are there in IGBT?

- A) Single layer
- B) 4 layers
- C) 2 layers
- D) 3 layers

364. What is the shape of mandatory signs?

- A) Triangular
- B) Rectangular
- C) Circular
- D) Square

365. Which electrical parameter is measured by the megger?

- A) Frequency
- B) Insulation resistance
- C) Current
- D) Voltage

366. Which IC is used for the function of 4 bit shift register?

- A) IC 7447
- B) IC 7404
- C) IC 7493
- D) IC 7495

367. What is the package type for BF 245B?

- A) TO-72
- B) TO-92
- C) TO-82
- D) TO-102

368. Which component, which reads the command from memory and executes?

- A) Processor
- B) Read Only Memory
- C) Graphics card
- D) Random Access Memory

369. Which is the major factor to determine the quality performance of A/D converter?

- A) Degree of accuracy
- B) Proportional to the binary weight
- C) Number of bits used
- D) Number of bits used

370. Rate of change of input voltage

- A) Rate of change of output frequency
- B) Rate of change of output voltage
- C) Rate of change of output voltage
- D) Rate of change of input voltage

371. What is the full form of the abbreviation PMMC meter?

- A) Principle Magnet Moving Coil meter
- B) Parallel Magnet Moving Coil meter
- C) Permanent Magnet Moving Coil meter
- D) Position Magnet Moving Coil meter

372. What is the maximum forward gate current (I_g) for BFW10 JFET?

- A) 20 mA
- B) 10 mA
- C) 8 mA
- D) 5 mA

373. Which voltage level is reached to increase the current

through DIAC rapidly?

- A) Break over voltage
- B) Cut in voltage
- C) Zener voltage
- D) Break down voltage

374. What is the common and popular application of U.J.T?

- A) Motor speed controller
- B) Multivibrator
- C) Voltage regulator
- D) Relaxation oscillator

375. How does the values of bias resistors selected for collector current in class -B amplifiers?

- A) Q point set slightly below cut-off
- B) Quiescent current at mid point
- C) Quiescent current beyond the cut-off point
- D) Quiescent current over the cut-off value

376. What is the switching speed of solid state relays?

- A) 1 to 100 nano seconds
- B) 10 to 60 nano seconds
- C) 1 to 100 milli seconds
- D) 1 to 25 nano seconds

377. What is the advantage of PIN photo diodes?

- A) Low sensitivity in the infrared range
- B) Low sensitivity in the Ultraviolet range
- C) Medium sensitivity in the infrared range
- D) High sensitivity in the infrared range

378. Which electronic device inversely changes its resistance with the amount of light falling on it?

- A) Photo transistors
- B) Photo resistors
- C) Photo voltaic cells
- D) Photo diodes

379. Which tool is used for the simplest method of skinning wires?

- A) Thermal wire stripper
- B) Mechanical wire stripper
- C) Manual wire stripper
- D) Electrician's knife

380. What is the purpose of flux in soldering electronic circuit components?

- A) Dissolve the oxide layer on the metal surface
- B) Form the oxide layer
- C) Increase the melting temperature of solder
- D) Reduce the solder cooling time

381. Which method is adopted to charge a car battery with voltage rating of 2.3 V per cell?

- A) Trickle charging method
- B) Constant current charging method
- C) Float charging method
- D) Constant voltage charging method

382. Why LC tuned circuits are not used in audio frequency oscillators?

- A) LC components are not available
- B) LC tank circuit does not produce AF signals
- C) LC tank circuit operation requires high voltage
- D) LC values required is too large

383. What is the shape of standard wire gauge?

- A) Cylindrical glass disk
- B) Rectangular plastic disk
- C) Square metal disk
- D) Circular metal disk

384. Which property of the capacitor stores electrical energy in electrostatic field?

- A) Dielectric
- B) Stray capacitance
- C) Capacitance
- D) Capacitive reactance

385. What is the total voltage of six 1.5 V cells, connected in series?

- A) 9 VDC
- B) 12 VDC
- C) 6 VDC
- D) 3 VDC

386. What type of ripple filter circuit is used for large load current requirements?

- A) Capacitor Input filter
- B) Inductor Input filter
- C) RC filter
- D) LC filter

387. What is the maximum drain current ID for BFW10?

- A) 10 mA
- B) 20 mA
- C) 30 mA
- D) 5 mA

388. Which device is a unipolar transistor?

- A) FET
- B) IGBT
- C) UJT
- D) BJT

389. Which electrolyte is used in lead-acid battery?

- A) Potassium hydroxide solution
- B) Zinc chloride
- C) Sulphuric acid
- D) Alkaline solution

390. What is the range of temperature used in soldering station?

- A) 450 Degree Centigrade to 600 Degree Centigrade
- B) 150 Degree Centigrade to 450 Degree Centigrade
- C) 800 Degree Centigrade to 1000 Degree Centigrade
- D) 600 Degree Centigrade to 800 Degree Centigrade

391. When does the rosin flux melts in a soldering process?

- A) After the solder melts
- B) When the solder is melting
- C) When the solder is heated
- D) During the solder is melting

392. Which is the fastest A/D conversion techniques?

- A) High to medium speed data acquisition applies
B) Low speed data acquisition applies
C) Absolute conversion accuracy
D) Absolute conversion accuracy

393. What is the drawback of IGBT compared to the power MOSFET?

- A) Poor current conduction capability
B) Poor switching speed
C) Higher driving power requirement
D) Not suitable for power applications

394. What is the main application of photo resistor?

- A) Controls of street lighting systems
B) Voltage rectification
C) To generate oscillations
D) Demodulation purpose

395. Which component is used to remove the heat generated inside the SMPS?

- A) Heat sink
B) Mica film spacer
C) Silicon grease
D) Cooler fan

396. What is the name of effect of changing current in one coil, induces EMF in nearby coil?

- A) Mutual induction
B) Coupling
C) Induction
D) Self induction

397. What is the function of pin number 2 of IC 555 timer circuit?

- A) "+VCC"
B) Trigger
C) Trigger
D) Reset

398. What is the name of the circuit that shifts the original signal in a vertical downward direction?

- A) Peak clipper circuit
B) Combination clipper circuit
C) Negative clamping circuit
D) Positive clamping circuit

399. Which instrument used to measure resistance, capacitance and inductance?

- A) LCR bridge
B) Wein bridge
C) Kelvin bridge
D) Wheatstone bridge

400. Which electrical quantity controls the operation of the bipolar transistor device?

- A) Voltage
B) Frequency
C) Energy
D) Current

401. When does the biased negative clipper removes the portion of input signal?

- A) During the positive half cycle of input
B) Signal voltage becomes greater than bias battery voltage
C) Signal voltage is lesser than bias battery voltage
D) Signal voltage equals the bias battery voltage

402. How power rating is specified for transformers?

- A) Horse power (HP)
B) Watts (W)
C) Volt ampere (VA)
D) Voltage (V)

403. What is the function of solid state relay(SSR)?

- A) High gain amplifier
B) High frequency oscillator
C) Low pass filter
D) High speed switching

404. What is the function of pin number 4 of the IC 555?

- A) Reset
B) Reset
C) Set
D) Threshold

405. What is the result of forced air is blown to cool the joint while soldering?

- A) Disturbs the chemical bonding
B) Joint becomes mechanically stronger
C) Solder setting very slowly
D) Results in dry brittle joint

406. Which impurity is added to form P - type semiconductor material?

- A) Phosphorus
B) Antimony
C) Arsenic
D) Gallium

407. How the accuracy of amplitude and frequency measured by CRO is checked?

- A) By function generator
B) By sine wave signal
C) By built-in calibration
D) By complex wave form signal

408. What is the purpose of trimmer capacitor?

- A) Coupling
B) Filtering
C) Fine tuning
D) Decoupling

409. What is the maximum drain - source voltage, VDS for BFW10?

- A) 40 V
B) 30 V
C) 50 V
D) 20 V

410. What is the load current handled by the solid state relay that must be mounted to some heatsink to protect the device?

- A) Greater than 4 Amp
B) 1 Amp
C) 2 Amp
D) 3 Amp

411. Which is the maximum size of drill bit used in electrical

hand drilling machine?

- A) 0.35 mm
- B) 6.5 mm
- C) 1.5 mm
- D) 3.5 mm

412. How the stationary electric charges are called?

- A) Static charges
- B) Kinetic charges
- C) Electrical charges
- D) Chemical charges

413. Which condition the mechanical zero error occur in panel meters?

- A) At load connected condition
- B) At load connected condition
- C) At voltage connected condition
- D) At normal condition

414. Which memory device loses data on power failure?

- A) CD ROM
- B) RAM
- C) ROM
- D) Hard disc

415. Which option opens a list of programs, currently installed in the computer?

- A) Start menu
- B) All program
- C) Help menu
- D) Recent documents

416. Which mode is used in differential amplifier?

- A) Common emitter
- B) Common emitter
- C) Common base
- D) Common - mode operation

417. Which is the major factor determines the quality performance of A/D converter?

- A) Conversion cycle
- B) Measuring parameter
- C) Measuring parameter
- D) Depends on data latch

418. What is the range of photo current for photo transistor BPX 38?

- A) 0.3MA to 2.7MA
- B) 0.4MA to 3.8MA
- C) 0.2MA to 1.6MA
- D) 0.1MA to 1.2MA

419. What is the process of adding impurities to a pure semi conductor material?

- A) Doping
- B) Forming
- C) Etching
- D) Diffusion

420. What is the common and popular application of U.J.T?

- A) Voltage regulator
- B) Relaxation oscillator
- C) Multivibrator
- D) Motor speed controller

421. What is the full form of the abbreviation LBA in computer system?

- A) Logical block accessing
- B) Low block accessing
- C) Large boot addressing
- D) Large block accessing

422. What is the maximum reverse voltage that can be applied across the general purpose LED?

- A) 8 V
- B) 12 V
- C) 15 V
- D) 32 V